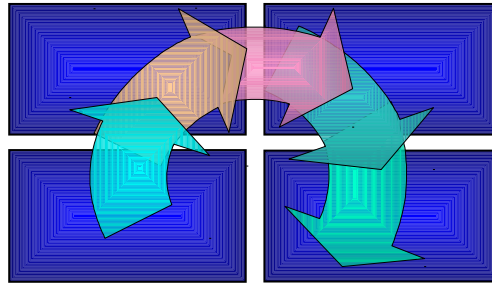


PR-07

PROGRAM REVIEW



HUMAN PERFORMANCE CENTER
(HPC)

5 November
2004

PROGRAMS

- **HP Projects**
- **Science of Learning (SL)**
- **Job Task Analyses (JTAs)**
- **Acquisition**

Strategy Alignment

NETC Goals & Objectives

**Goal 4: Human Performance Systems Model (HPSM)
institutionalized
as the framework to improve performance across
the Navy**

Claimancy Objectives:

- 1. Each Component Commander (NETC HQ, NETPDTC, NETSAFA included) use the HPSM to evaluate alternative solutions, and develop metrics and feedback mechanisms for all programs under their cognizance**
- 2. Develop a Navy Human Performance workforce**
- 3. Develop a Navy-wide Human Performance organization**

Strategy Alignment

NETC Goals & Objectives

Goal 5: Science of Learning used to improve learning and performance

Claimancy Objectives:

- 1. Each Component Commander (NETC HQ, NETPDTC, NETSAFA included) ensure the Science of Learning is the foundation of all training and education.**
- 2. Create standardized Claimancy guidelines and templates to institutionalize the Science of Learning.**
- 3. Develop Science of Learning 5VM.**

HPC FY05 Goals & Objectives

1. Develop a Navy-wide Human Performance Organization.

- 1.1 Align all Navy HP processes, policies and structures in support of CNO guidance.
- 1.2 Recruit and retain a professional HP Technologist (HPT) workforce comprised of
military and civilian personnel.
- 1.3 Develop and implement a HPT 5 Vector Model (5VM), aligned with civilian industry,
to manage the career development of the Navy's HP workforce.
- 1.4 Develop a "performance based" HPC workforce.
- 1.5 Establish formal HP Mentoring Program to enhance the personnel and professional
development of the HPC workforce.
- 1.6 Develop and leverage partnerships and alliances (ISPI&ASTD in particular).
- 1.7 Implement HPC Management Control Program and map assessable units internal
and external to HPC.
- 1.8 Develop and implement Activity Based Cost (ABC), Balanced Score Card

HPC FY05 Goals & Objectives

2. Institutionalize the Human Performance System Model (HPSM)

~~discipline across the Navy~~

- 2.1 Provide support to Task Force Warrior.
- 2.2 Conduct Human Performance Improvement (HPI) projects for NETC, Fleet,
Acquisition, and other customers to improve performance at individual, team,
and organizational levels.
- 2.3 Demonstrate performance improvement within the Navy as a result of HPI
Initiatives.
- 2.4 Educate customers on HPSM/HPI capabilities through a Public Affairs and
Marketing information campaign.
- 2.5 ~~Institutionalize a Navy wide process that creates an integrated~~

HPC FY05 Goals & Objectives

3. Institutionalize the Science of Learning (SL) throughout the Navy

- 3.1 Chair the Navy-wide SL Advisory Group.
- 3.2 Inject the SL discipline into all Navy training development processes.
- 3.3 Institute the NETC Learning Strategies Consortium (LSC) as the primary
vehicle to continuously discover and leverage advance in the field of SL.
- 3.4 Build and maintain a Science of Learning Knowledge Repository (SLKR).
- 3.5 Partner with OPNAV 11 to develop and implement a 5VM for the SL workforce.

3.6 Educate Navy constituencies on the SL discipline through a Public

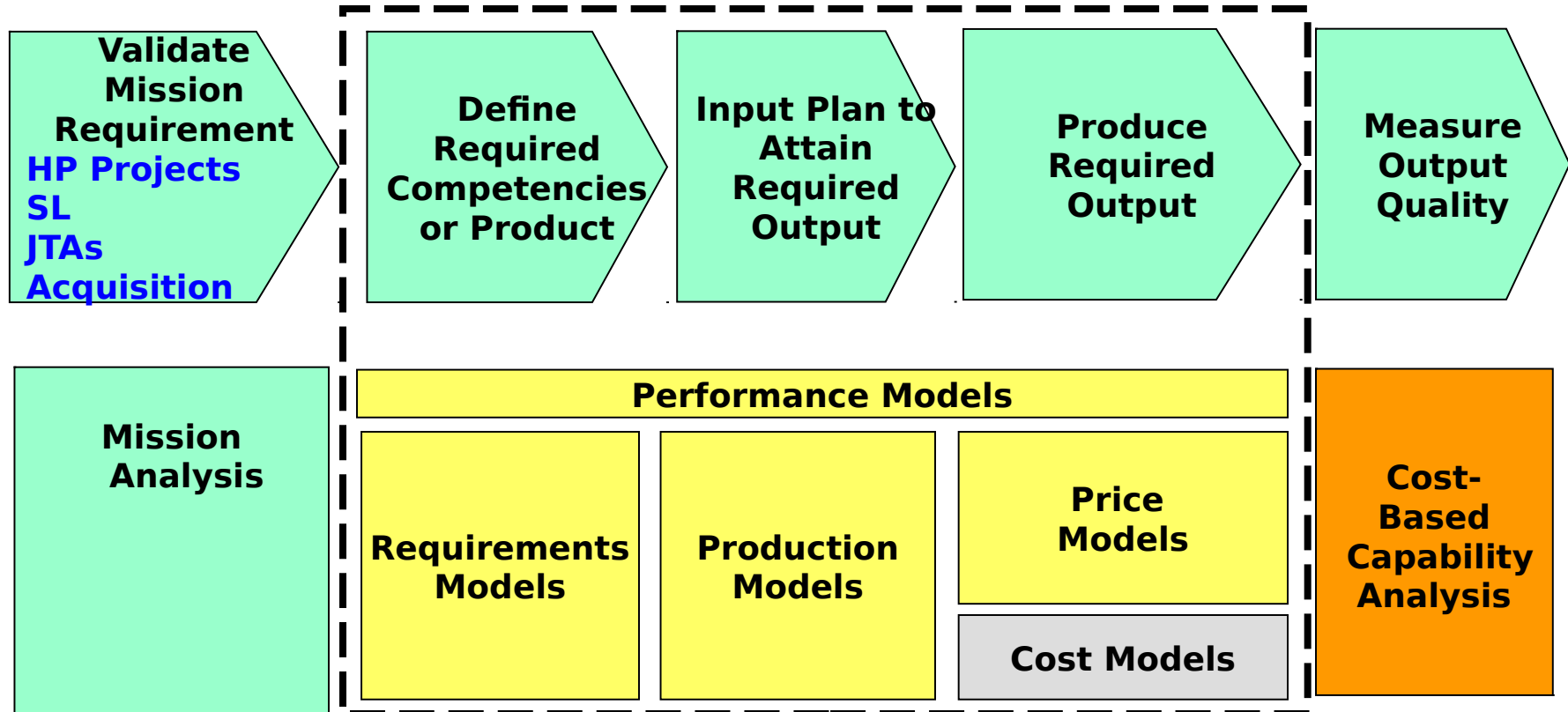
HPC FY 05 Goals and Objectives: Metrics & Targets

<p><u>HPI</u></p> <ul style="list-style-type: none"> • (3) HPI projects per analyst • One project per Det = ROI of 8:1 • 75% of HPI projects with more than (1) solution implemented • (1) HPI project solution per quarter using Modeling and Simulation 	<p><u>SL</u></p> <ul style="list-style-type: none"> • Predict 75% of Navy-wide training solutions will apply SL • 10% reduction in training costs with first-time infusion of SL • 10% increase in improved workplace performance as a result of SL intervention
<p><u>JTA</u></p> <ul style="list-style-type: none"> • Provide support to Task Force Warrior: • JTA Levels 1 & 2 completed by Jan 05 • JTA Level 3 completed by Sep 05 • Apply SL to JTA Quad Level II • JTA data mapped back into Center curriculum to validate instruction 	<p><u>ACQ</u></p> <ul style="list-style-type: none"> • Apply HPI at the front end of the acquisition process vs. tail end of delivery • Partner with SYSCOMs & Task Force Warrior on LCS, DDX pilots to improve HIS process and products • Align HSI and HPI disciplines

Assessment Approach



Identify and Assess Processes and Outputs of Key Business Sectors



Evaluate Interdependencies of Business Sectors Via Modeling

Manpower HPC Summary

End Strength	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11
Required	95	173	173	173	173	173	173	173
Funded	95	173	173	173	173	173	173	173
Delta	0	0	0	0	0	0	0	0
Officer								
Required	8	22	22	22	22	22	22	22
Funded	8	22	22	22	22	22	22	22
Delta	0	0	0	0	0	0	0	0
Enlisted								
Required	0	8	8	8	8	8	8	8
Funded	0	8	8	8	8	8	8	8
Delta	0	0	0	0	0	0	0	0
Civilian								
Required	87	143	143	143	143	143	143	143
Funded	87	143	143	143	143	143	143	143
Delta	0	0	0	0	0	0	0	0

Command & Overhead

HP Technologists

Resources Summary Profile

O&MN Funding

PE / AGSAG	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11
Required	\$9.43 M	\$16.4 M	\$16.3 M	\$15.6 M	\$15.7 M	\$15.7 M	\$15.7 M	\$15.7 M
Funded	\$9.43 M	\$13.7 M	\$15.1 M	\$14.4 M	\$14.5 M	\$14.5 M	\$14.5 M	\$14.5 M
Delta	\$0.0M	\$2.7M	\$1.2M	\$1.2M	\$1.2M	\$1.2M	\$1.2M	\$1.2M

- Develop Science of Learning Knowledge Repository
- Market the Human Performance Center
- No PAO billet included in budget/manpower authorizations

Business Initiative: KM System

Task	Status	Completion date
Identification of Initial Requirements	Initial HPC org requirements Identified . KM system project build phase 2 in process.	10/15/04
Tracking of Project Status	Static Excel version in place. KM system data base currently being populated with vetted project info.	11/12/04
Sharing of Lessons Learned	N6 currently evaluating HPC core processes to determine knowledge capture point and best method of collection.	1/31/05
Tools for Conducting Analyses	Tools, templates and guidelines will be integrated into KMS as available.	1/31/05
Access to Cost Data and Performance Indicators	Data sources and performance indicators will be made available and integrated as available.	3/31/05

Business Initiative: HP Projects Performance Analysis Support Tool

- Tools lay out HPI process with data required and key exit criteria defining completion of each step in the process.
- Cooperative Agreement with Proofpoint Systems, Inc., signed Sept 04.
- Current status: Tools being developed.
- Projected completion: Alpha will be available in March.

Business Initiative: Workload Collection Tool (WCT)

- A Web-based Tool that Supports HPC Project Management, Dashboard, and POM Process
- Some ABC capability (tracks man-hours by project, actual costs, earned value management (EVM), projected workload, and project management efficiencies)
- Status
 - Dec 04: Load N7 Projects
 - Jan 05: WCT and Electronic Timecards Go Live
 - Mar 04: WCT Rolls out to HPC

New Business Initiative: OPNAV Instruction

- Current policy does not mandate use of HPSM
 - Need policy to reinforce goal of applying HPSM prior to launching training (and other) solutions
 - Policy will direct HPI analysis prior to initiating new training
- Policy will outline roles and responsibilities of HPC and customers
 - Formalizes emerging processes
- Policy can establish Advisory Board to facilitate addressing issues that cross organizational boundaries between customers and increase likelihood of implementation
- Provides framework for identification of total workload vs. reliance on customer requests

New Business Initiative: HP Advisory Board

- During HPI pilots, determined that many of the performance issues cross organizational boundaries
- Initial customer does not have authority to take actions to address root causes outside of organizational domain
- Options are to engage additional customers or re-scope effort
 - Requires time
 - Stakeholder may not be receptive to changing processes
 - Re-scoping may lead to sub-optimization
- Advisory Board would
 - Drive broader participation in projects to ensure cross-organizational performance solutions are implemented
 - Provide visibility and management oversight
 - Oversee HP/SL Implementation Fund

New Business Initiative: HP Advisory Board

- Advisory Board would be comprised of:
 - CNETC
 - CNP
 - CNI
 - CFFC
 - SYSCOMS
- HPC would serve as Executive Agent

Unfunded Issues

- Issue 1: Science of Learning Knowledge Repository
- Issue 2: HPI/SL Innovation Implementation Fund
- Issue 3: Navy-wide HPC: Detachments outside
NETC
- Issue 4: Additional billets for New Tasking

ISSUE 1: Science of Learning Knowledge Repository¹⁹

PE / AGSAG	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11
Required	\$0.0M	\$2.0M	\$0. 5M	\$0. 5M	\$0.5M	\$0.5M	\$0.5M	\$0.5M
Funded	\$0.0M	\$0.0M	\$0.0M	\$0.0M	\$0.0M	\$0.0M	\$0.0M	\$0.0M
Delta	\$0.0M	\$2.0M	\$0. 5M	\$0. 5M	\$0.5M	\$0.5M	\$0.5M	\$0.5M

- Description: The SLKR will provide support to practioners to enable them to effectively and efficiently infuse SL into their interventions. Included as task from CNO SL BOA briefing. Funding enables contractor support for repository development.
- Capability at Current Funding: Initial conceptual design being developed with existing HPC resources. Additional funding needed to launch the SLKR by end FY 05. Support funds for updating the content and enhancing the functionality needed in the outyears.

ISSUE 1: Science of Learning Knowledge Repository²⁰

- Alternatives at Current Funding Levels
 - Will place greater burden on HPC SL resources to execute SL infusion because tool will not be available for practitioners.
 - Reduced application of SL.
- Impact / Risk to Whom
 - Delay execution of BOA tasks.
 - Delay achievement of SL goals.

ISSUE 2: HPI/SL Implementation Fund

PE / AGSAG	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11
Required	\$0.0M	\$9.0 M	\$9.0M	\$10.0M	\$10.0M	\$10.0M	\$10.0M	10.0M
Funded	\$0.0M	\$0.0M	\$0.0M	\$0.0M	\$0.0M	\$0.0M	\$0.0M	\$0.0M
Delta	\$0.0M	\$9.0M	\$9.0M	\$10.0M	\$10.0M	\$10.0M	\$10.0M	10.0M

Description: Provides seed funding for interventions recommended as part of an HPI analysis that, if implemented, will yield performance improvement and ROI. Establishes a Navy-wide fund for implementing HPI/SL solutions that will tap resources from organizations outside of NETC. Should be a self-replenishing fund (% of ROI contributed to Fund to resource HPI/SL implementations).

HPC would manage this fund and report on its use to the HP Advisory Board. Funds for implementation outside of NETC must be funded by appropriate sponsor.

ISSUE 2: HPI/SL Implementation Fund

- Capability at Current Funding:
 - While not all interventions require funding, those that do will be delayed until funds can be identified.
 - ROI may accrue to an organization other than the one who has to fund and develop the solution. There is no incentive for this organization to invest in a solution in spite of a positive ROI for the Navy at large.
- Alternatives at Current Funding Levels
 - Organizations will have to re-allocate funds during execution to develop HPI solutions.
- Impact / Risk to Whom
 - Solutions may not be developed.
 - Failure to achieve ROI.

Issue 3: Navy-wide HPC: Detachments outside NETC Requested to Date

- Description: HPC has been directed to develop a Navy-wide organization. This issue focuses on how to secure funding for the new detachments outside the NETC claimancy.
- Capability at Current Funding: The current approach is to use an MOA and have the organization hire the HP technologist.
- Impact / Risk to Whom
 - Personnel do not report to HPC.
 - Does not provide for funding of support billets.

Human Performance Center

FY 05 Structure

N00T

Naval Education & Training Command



★★★
DCFFC

★★★
**Virtual
SYSCO**

M

ACQ

★★★
FLEET

CNAF (Det)

CNSF (Det)

CSF * (Det)

CPF (Det)

NNWC (Det)

FASWC (Det)

TBD ??? (Det)

NAVSEA (Det)

NAVAIR (Det)

SPAWAR (Det)

OPTEVFOR (Det)

TBD ??? (Det)

**"Navy-
Wide"**
Det's

NMETC (Det)

CNI (Det)

SWCC (Det)

BUPERS (Det)

TBD ??? (Det)

DoD / Joint / Agency

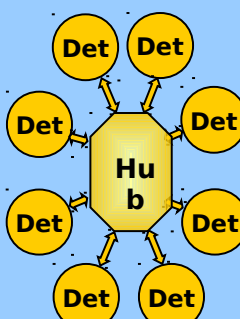
Arm

Air Force

Marines

Coast Guard XXX

**Human
Performance
Center**



★★
**Naval
Personnel
Development
Command**

CNATT (Det) SWOS (Det)
 CNE (Det) CEOD/D (Det)
 CNL (Det) SLO (Det)
 CPD (Det) CENATF (Det)
 CCI (Det) CSCS (Det)
 CSFE (Det) CIT (Det)
 CSS (Det) CATNSF (Det)

★★
**Naval
Service
Training
Command**

• ETC
• OTC-P
• OTC-N

Det

★★
CNATRA

★★
Navy War College

★★
Navy Postgraduate School

Det

Det

Det

(Det) Active (Det) Vacant

Phase 1

Phase 2

Phase 3

Phase 4

Phase 5

HPC Phased Implementation

Navy-wide HPC: Detachments outside NETC

- CNI: 16 regions: 2 HP technologists each
- CNP: 5 technologists (3 officer, 2 civilian)
- NETWARCOM: 1 HP technologist

Detachments outside NETC

Funding Alternatives

26

- Option 1:
 - FY05-FY07: MOA w/ other Claimants
 - FY08- FYDP: Baseline Realignment
- Option 2:
 - FY05-FY07: MOA w/ other Claimants
 - FY08- FYDP: NETC POM for Billets
- Option 3:
 - Establish HPC Reimbursable Billets
 - Execute on reimbursable basis

ISSUE 4: Additional Billets for New Tasking

PE / AGSAG	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11
Required	\$0.0M	\$.7M	\$.7M	\$.7M	\$.7M	\$.7M	\$.7M	\$.7M
Funded	\$0.0M	\$0.0M	\$0.0M	\$0.0M	\$0.0M	\$0.0M	\$0.0M	\$0.0M
Delta	\$0.0M	\$.7M	\$.7M	\$.7M	\$.7M	\$.7M	\$.7M	\$.7M

- **Description:**

- BOA direction resulted in additional tasking to the HPC not included in the original baseline.
- This funding supports an increase in HP SL resources and a position to carry out CNO guidance to market the HPC.
- 6 additional military billets are requested to meet increased demand.

ISSUE 4: Additional Billets for New Tasking

- Capability at Current Funding:
 - Cannot currently meet all SL implementation requests.
 - PAO position not in HPC initial structure. Identified need for this capability to market HPC.
- Alternatives at Current Funding Levels
 - Reduced application of SL.
 - For PAO, currently using contractor support, but contractor cannot perform all PAO functions.
- Impact / Risk to Whom
 - Delay execution of BOA tasks.
 - Delay achievement of SL goals.

LINKED SLIDES

Manpower

HPC Command and Overhead

End Strength	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11
Required	26	30	30	30	30	30	30	30
Funded	26	30	30	30	30	30	30	30
Delta	6	0	0	0	0	0	0	0
Officer								
Required	4	4	4	4	4	4	4	4
Funded	4	4	4	4	4	4	4	4
Delta	0	0	0	0	0	0	0	0
Enlisted								
Required	0	0	0	0	0	0	0	0
Funded	0	0	0	0	0	0	0	0
Delta	0	0	0	0	0	0	0	0
Civilian								
Required	22	26	26	26	26	26	26	26
Funded	22	26	26	26	26	26	26	26
Delta	0	0	0	0	0	0	0	0



Manpower

HPC Technologists

End Strength	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11
Required	69	143	143	143	143	143	143	143
Funded	69	143	143	143	143	143	143	143
Delta	0	0	0	0	0	0	0	0
Officer								
Required	4	19	19	19	19	19	19	19
Funded	4	19	19	19	19	19	19	19
Delta	0	0	0	0	0	0	0	0
Enlisted								
Required	0	8	8	8	8	8	8	8
Funded	0	8	8	8	8	8	8	8
Delta	0	0	0	0	0	0	0	0
Civilian								
Required	65	116	116	116	116	116	116	116
Funded	65	116	116	116	116	116	116	116
Delta	0	0	0	0	0	0	0	0



Manpower

HPT Support and Development

End Strength	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11
Required	26	43	43	43	43	43	43	43
Funded	26	43	43	43	43	43	43	43
Delta	0	0	0	0	0	0	0	0
Officer								
Required	1	6	6	6	6	6	6	6
Funded	1	6	6	6	6	6	6	6
Delta	0	0	0	0	0	0	0	0
Enlisted								
Required	0	0	0	0	0	0	0	0
Funded	0	0	0	0	0	0	0	0
Delta	0	0	0	0	0	0	0	0
Civilian								
Required	25	37	37	37	37	37	37	37
Funded	25	37	37	37	37	37	37	37
Delta	0	0	0	0	0	0	0	0



Manpower

HPC Detachments - Summary

End Strength	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11
Required	43	100	100	100	100	100	100	100
Funded	43	100	100	100	100	100	100	100
Delta	0	0	0	0	0	0	0	0
Officer								
Required	3	13	13	13	13	13	13	13
Funded	3	13	13	13	13	13	13	13
Delta	0	0	0	0	0	0	0	0
Enlisted								
Required	0	8	8	8	8	8	8	8
Funded	0	8	8	8	8	8	8	8
Delta	0	0	0	0	0	0	0	0
Civilian								
Required	40	79	79	79	79	79	79	79
Funded	40	79	79	79	79	79	79	79
Delta	0	0	0	0	0	0	0	0



Manpower

HPC Detachments - NETC

End Strength	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11
Required	38	78	78	78	78	78	78	78
Funded	38	78	78	78	78	78	78	78
Delta	0	0	0	0	0	0	0	0
Officer								
Required	3	13	13	13	13	13	13	13
Funded	3	13	13	13	13	13	13	13
Delta	0	0	0	0	0	0	0	0
Enlisted								
Required	0	8	8	8	8	8	8	8
Funded	0	8	8	8	8	8	8	8
Delta	0	0	0	0	0	0	0	0
Civilian								
Required	35	57	57	57	57	57	57	57
Funded	35	57	57	57	57	57	57	57
Delta	0	0	0	0	0	0	0	0



Manpower

HPC Detachments - Fleet

End Strength	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11
Required	2	8	8	8	8	8	8	8
Funded	2	8	8	8	8	8	8	8
Delta	0	0	0	0	0	0	0	0
Officer								
Required	0	0	0	0	0	0	0	0
Funded	0	0	0	0	0	0	0	0
Delta	0	0	0	0	0	0	0	0
Enlisted								
Required	0	0	0	0	0	0	0	0
Funded	0	0	0	0	0	0	0	0
Delta	0	0	0	0	0	0	0	0
Civilian								
Required	2	8	8	8	8	8	8	8
Funded	2	8	8	8	8	8	8	8
Delta	0	0	0	0	0	0	0	0



Manpower

HPC Detachments - Acquisition

End Strength	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11
Required	3	14	14	14	14	14	14	14
Funded	3	14	14	14	14	14	14	14
Delta	0	0	0	0	0	0	0	0
Officer								
Required	0	0	0	0	0	0	0	0
Funded	0	0	0	0	0	0	0	0
Delta	0	0	0	0	0	0	0	0
Enlisted								
Required	0	0	0	0	0	0	0	0
Funded	0	0	0	0	0	0	0	0
Delta	0	0	0	0	0	0	0	0
Civilian								
Required	3	14	14	14	14	14	14	14
Funded	3	14	14	14	14	14	14	14
Delta	0	0	0	0	0	0	0	0



HP Projects

Human Performance Improvement is a systematic based approach to improve performance, conducted through a cause analysis. It:

- Closes the gap between *“is” results* (current performance) and *“should” results* (required performance).
- Addresses performance at the job, process and organization levels
- Relates goals to the performance of people
- Uncovers the reasons for performance gaps
- Develops solutions to address the gaps
- Manages change
- Evaluates results



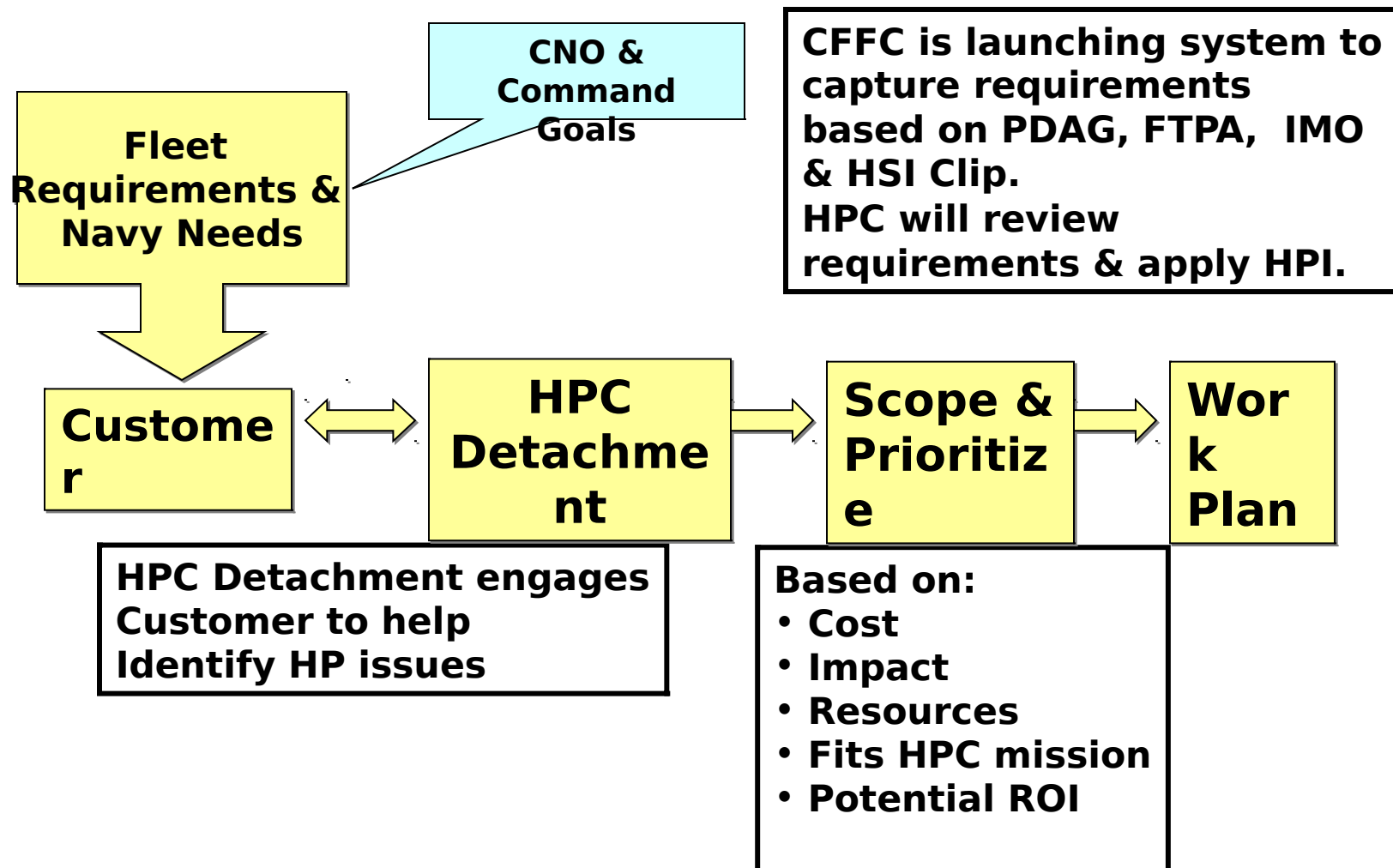
HP Projects

Analysis Results

- **Validate Mission Requirement**
- **Define End Products**
- **Demand Basis for Input Plan**
- **Develop Production Capability**
- **Measure Output Quality**

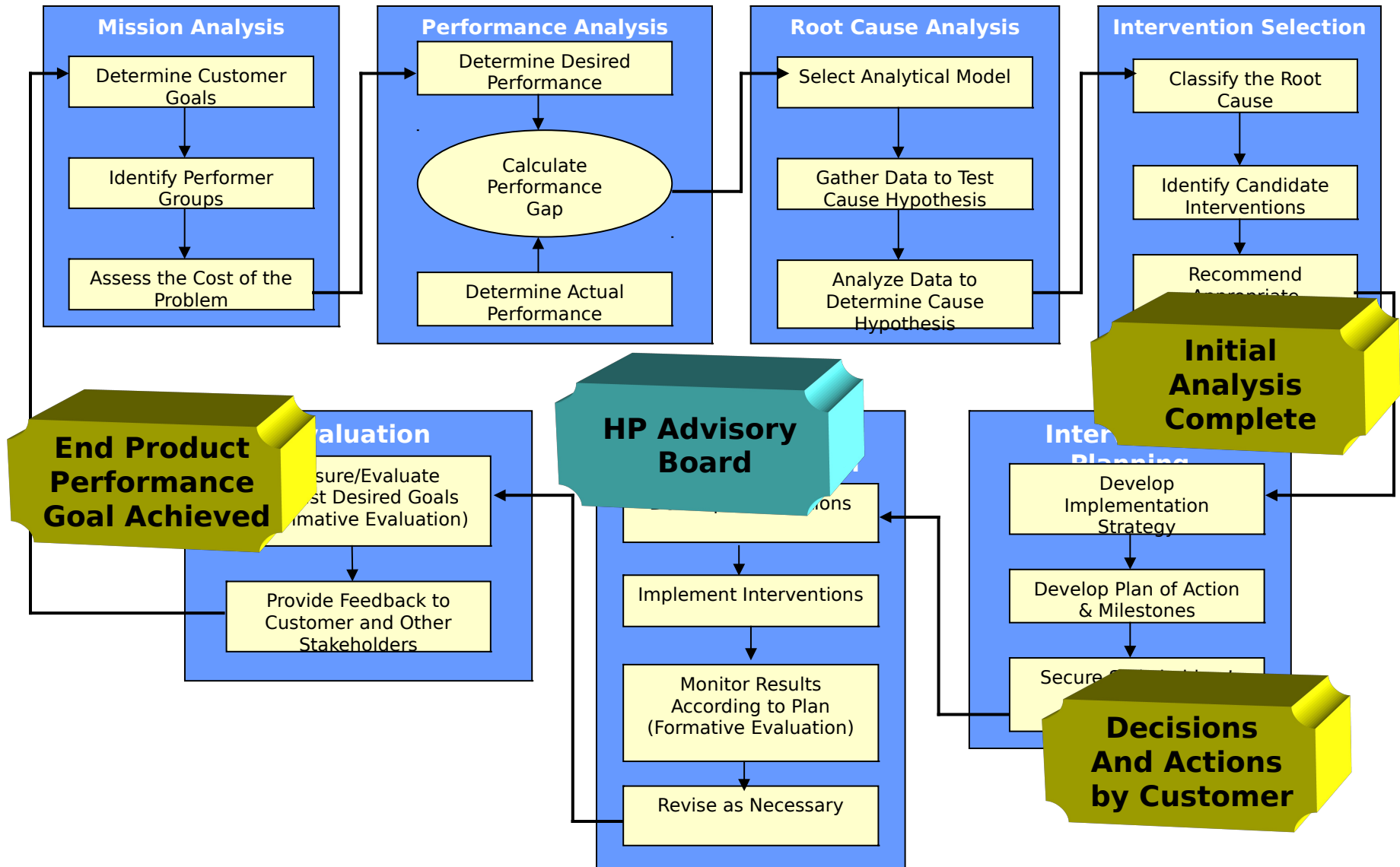


HPI Requirements Determination Process



Human Performance Improvement

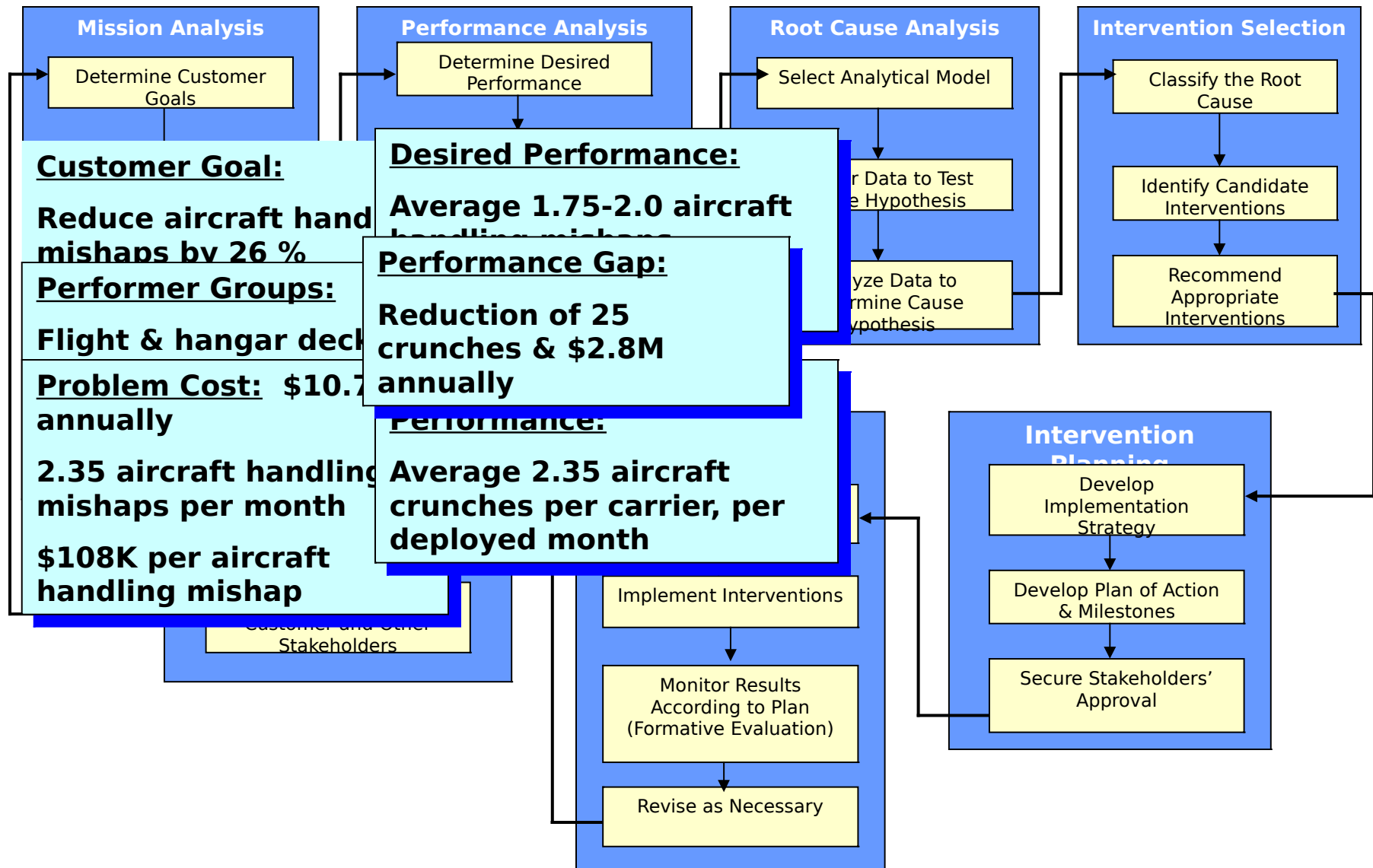
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Human Performance Improvement

~~Flight Deck Safety~~

41



Root Cause & Interventions (1-4)

CAUSE	INTERVENTIONS
1. Job skills are perishable, and degrade over time when carriers are not deployed with aircraft embarked.	Implement TYCOM policy for cross-deck training and qualifications for flight deck crewmembers. Include criteria for currency of billet qualification requirements now mandated.
2. Flight deck crewmembers working at night have difficulty seeing effectively.	COMNAVAIRFOR implement policy to maintain low-level illumination on the flight deck at night, not to interfere with requirements of the Navigator.
3. NAVAIR 00-80T-120 (CV/CVN NATOPS) 5-foot perimeter for safeties around aircraft in motion open to interpretation; can result in unsafe operating practices.	Eliminate 5-foot safety perimeter rule, and require all aircraft movements on flight deck to be full safety moves (except moves on/off cats, and when taxiing off landing area to first marshalling point after recovery).
4. Handling mishap data collection and reporting is inconsistent and incomplete.	Revise NAVAIR 00-80T-120 (CV/CVN NATOPS) to clarify submission requirements, simplify reporting methods, clarify measures of effectiveness, and mandate additional report content.

Root Cause & Interventions (5-8)

CAUSE	INTERVENTIONS
5: Safety culture does not effectively prioritize safety values over goal and production focused behavior.	Design and implement proactive safety culture specifically directed to reduction/elimination of handling mishaps by 100% adherence to safe operating procedures.
6. Current work shift structures contribute to development of fatigue conditions among Air Department personnel.	Redesign work shifts to improve opportunities for sleep, and for sleep deficit recovery periods.
7. Aircraft parking spots are not permanently marked on flight deck, forcing aircraft directors to memorize locations.	Intervention deferred
8. Flight deck crewmembers frequently cited for failing to adhere to standard procedures and for failing to	Establish strong and viable safety culture through use of job aids, motivational interventions and modification of work shifts to acknowledge and respond to effects of fatigue.

Deferred Interventions

CAUSE	Interventions
<p>Job performance skills are perishable and degrade over time.</p>	<p>Develop shore-based training for aircraft movement skills, using dud aircraft in a simulated flight deck environment (e.g., specific flight deck zones marked on parking lots).</p> <p>REASON FOR DEFERRAL: Logistical obstacles to utilization of dud aircraft for this purpose.</p>
<p>Aircraft parking spots not permanently marked.</p>	<p>Develop permanent markings for aircraft parking spots.</p> <p>REASON FOR DEFERRAL: Existing restrictions on deck markings, possibility that deck markings may become distractions for aircraft directors.</p>
<p>Flight deck crewmembers cited for failure to adhere to safety procedures, and failure to maintain situational awareness.</p>	<p>Proximity warning devices mounted on aircraft Signaling technology mounted in aircraft to support automated “Ouija Board”</p> <p>REASON FOR DEFERRAL: Technological obstacles seen as insurmountable.</p>

Define End Products

Program Area - HP Projects

- End Product = Results
 - Performance level achieved
 - ROI
- Process dependent on requests from customers
 - HP is still new; understanding of HP value is growing
 - Request may come in form of a request for a particular solution vs. HP analysis
 - Focus on performer vs. process or organizational level
- End product dependent on action by customer to implement interventions & quality of HP analysis assessed through evaluation.
- Implementation challenging when issue spans organizational boundaries.
- Was performance goal achieved?

Define End Products

HP Projects: Improvement Opportunities & Risk

- Improvement opportunities
 - Customer focus on solutions vs. requirements
 - Old process was to request a solution e.g., training, equipment vs. use HPI to determine how to best meet a requirement
 - Tendency to view HPI at the performer vs. organization or process level
 - May not see HPI as a way to achieve organizational goals
- Implementation Challenges
 - Performance issues cross multiple organizational boundaries
 - Customer may not have authority to implement all interventions without coordination with external organizations
 - Achievement of End result may require another organization to change, expend resources
- Risks: Medium
 - Push to develop solution vs. conduct analysis may lead to limited application of HPI
 - HPI may not be used to achieve organization goals
 - Failure to implement

Define End Products

HP Projects: Risk Mitigation

Risk mitigated by:

- Review of requests & interaction with HPC
- Specific goals set by NETC
- *Customer Dashboards/HP metrics*
- *OPNAV Instruction*
- *HPI/SL Implementation Fund*
- *HP Advisory Board*
- *HPC Alignment in accordance with CNO/NETC direction*



Input Plan

Program Area - HP Projects

- Project Inputs driven by
 - Requests from Customers
 - Fleet
 - NETC
 - Acquisition Community
 - *Navy-wide (CNP, CNI, etc.)*
 - Performance Improvement Goals should influence customer demand
 - Examples include:
 - CNO direction to improve efficiencies by 3%-5% annually
 - NETC IA goals
 - NETC infrastructure reduction objective
- Identify *Projected Workload*



HP Projects

Projected Workload

Dets	FY 04	FY 05	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11
NETC	48	102	122	135	148	156	156	156
Fleet	3	10	12	13	15	15	15	15
Emergent		112	134	148	163	171	171	171
Total Demand	51	224	269	296	325	342	342	342
Total Capacity		114	186	205	215	226	231	231
Projected ROI \$ M	\$24	\$86	\$140	\$153	\$161	\$169	\$173	\$173

- **FY04 HP Projects**
- **FY05 HP Projects**



FY04 HP Projects

Dets	Fact Finding	Analysis	Implementation	Evaluation	Completed	Total
NETC						
NPDC	5	17	4	3	17	46
NSTC		1				1
CNATRA					1	1
FLEET						
CNAF			1			1
CNSF		2				2
Grand Total	5	20	5	3	18	51

\$24.3 M Projected Return on Investment (ROI):

Estimated total of \$24.3M based upon 16 HPC projects which are in the implementation process.



FY05 HP Projects

(New Starts)

Customer	Fact Finding	Analysis	Implementation	Evaluation	Completed	Total	ROI \$ M
NETC							
NPDC	31	34	1			66	50
NSTC	32	1				33	25
CNATRA	2					2	2
NETPDTC		1				1	1
FLEET							
CNAF	3	1				4	3
CNSF	3	1				4	3
NETWARCOM	2					2	2
Emergent						112	84
Total Demand	73	38	1	0	0	224	170
Total Capacity						114	86

FY05 HP Projects

Capacity, Demand, & ROI

	Personnel	FY05 FTE	Projects per analyst	Projected Projects
<u>Capacity</u>				
#of analyst EOY04:	43	43	2	86
#of analyst hired FY05:	55	28	1	28
Total Capacity	98	71		114
<u>Demand</u>				
#of Known Projects				112
#of Emergent Projects (+ 100%)				112
Total projected #projects FY05				224
<u>ROI</u>				
#Projects (Constrained by capacity)				114
Estimate 50% of projects have ROI in FY05				57
ROI \$M (using \$1.5M per project)*				\$ 86 M

* Average of \$1.5 M ROI per project is extrapolated from FY 04 ROI estimates that project a total of \$24.3M for 16 HPC projects which are in the implementation process.

Input Plan

Program Area - HP Projects

- Improvement Opportunities
 - Factors Making Input Projection Difficult
 - Lack of history for demand
 - Limited understanding of how HP can be applied to achieve goals
 - Few mandates to use HP
 - Identify Potential Improvements
 - NETC objective to apply HPSM
 - Targets established by HPC for number of projects per technologist
 - HPC FY 05 Strategic Plan
 - Increase understanding through demonstrated successes
 - *Require HP analysis prior to initiating any new training*
- Risk: Low
 - Risks of Inaccurate Input Projections
 - Inability to meet future demands (demand exceeds capacity)
 - Excess resources (capacity exceeds demand)
 - Current approach is to reallocate resources within HPC to match demand



Produce Required Output

Improvement Opportunities- HP Projects

- Production Ramp-up
 - FY 05: Not at full strength; HP training; experience with HPI growing for both the HP technologist and the customer. Processes being tested & revised. Initiate institutionalization of processes.
 - FY 06: At NETC programmed strength; completion of initial NETC programmed training. Process adoption.
 - FY 07-FY 10: Trained & experienced HPT's. Processes become part of the culture.
- Productivity Enhancements and Process Efficiencies
 - Mentoring
 - HP Tools
 - KM System

Improvement Opportunities- HP Projects⁵⁵ Mentoring

- Mentoring team created; target for improvement established as part of HPC FY 05 Strategic Plan
 - Target: 25% improvement in workplace performance by September FY05, based on FY04 baseline.
 - Mentoring team working with detachments to achieve HPC internal targets:
 - Completion of 3 HP projects per analyst
 - One project per detachment with 800% ROI
 - 75% of HP projects with more than 1 solution implemented
 - Applied HPI to initial pilot projects to identify & address performance barriers.



Measuring Output Quality

Program Area - HP Projects

- Overall Assessment
 - Discuss How Product Quality Determined
 - Achievement of Results (End Product)
 - Criteria for each phase of model being developed
 - Evaluate Effectiveness of Methodology
 - Dependent on customer implementation
- Improvement Opportunities
 - Factors Making Product Quality Measurement Difficult
 - Baseline performance measures often do not exist
 - Working with CNA to identify data
- Risk: Low
 - Define Risks of Not Effectively Measuring Product Quality
 - Must ensure that metrics and supporting data collection are adopted by customer



Science of Learning

A growing body of knowledge extending our understanding of what learning is, how adults learn, and how that learning translates into measurable, improvable performance.

Applied when learning opportunities or obstacles have been identified as root causes through an HPI analysis.

Industry standard yields 20% ROI.



SL

Analysis Results

- **Validate Mission Requirement**
- **Define End Products**
- **Demand Basis for Input Plan**
- **Develop Production Capability**
- **Measure Output Quality**



Validate Mission Requirement Science of Learning

***Requirements Should be Prioritized and Based On
Valid Fleet and Navy Needs...***

- Fleet Mission Tasking
 - Learning interventions result from HPI analysis.
 - Learning interventions are tied by Navy Regulation to NTSPs. These should in turn be vetted through the SL process.
 - Projects are tied to fleet needs.

Validate Mission Requirement Science of Learning

***Requirements Should be Prioritized and Based On
Valid Fleet and Navy Needs...***

- Policy

- DoN Directives do not:
 - Currently drive SL requirements, but should.
 - Do not offer incentives for commands or practitioners who apply SL, nor are there consequences for those who do not.

Validate Mission Requirement Science of Learning

***Requirements Should be Prioritized and Based On
Valid Fleet and Navy Needs...***

- Revolution in Training Board of Advisors (RIT BOA) Tasking:
- Develop a Science of Learning Knowledge Repository (SLKR)
- Form the Science of Learning Advisory Group (SLAG)
- Provide direct technical support for SL projects emerging from fleet, acquisition and education/training communities.

Validate Mission Requirement Science of Learning

***Requirements Should be Prioritized and Based On
Valid Fleet and Navy Needs...***

CNETC Guidance

- Establish incentives & consequences for the use of SL
- Develop tools including Science of Learning Knowledge Repository (SLKR), SL Template & Guidelines
- Establish a 5VM for SL practitioners including performance metrics



Define End Products

Program Area -Science of Learning

- End Products include:
 - Tools:
 - Science of Learning Knowledge Repository
 - Guidelines
 - Templates
 - Technical Support
 - Analysis & Evaluation
 - Processes & Incentives
 - Performance metrics for SL practioners (5VM)
 - Initiatives to reinforce the use of SL
 - Consequences & Incentives

Define End Products

Program Area -Science of Learning

- HPC will develop Tools, Processes & Incentives working with SLAG
- Until these products are developed, SL infusion will be constrained by HPC resources available to provide technical assistance
- Plan is to extend reach of HPC through Tools, Processes & Incentives to practioners Navy-wide

Define End Products

Program Area -Science of Learning

- Evaluate Effectiveness of Methodology
 - Methodology can be highly effective, but only if customer adopts the recommended SL strategies.
- Determine Extent to Which End Products Meet Fleet / Other Requirements
 - Products are driven by Fleet requirements validated through an HPI analysis.

Define End Products

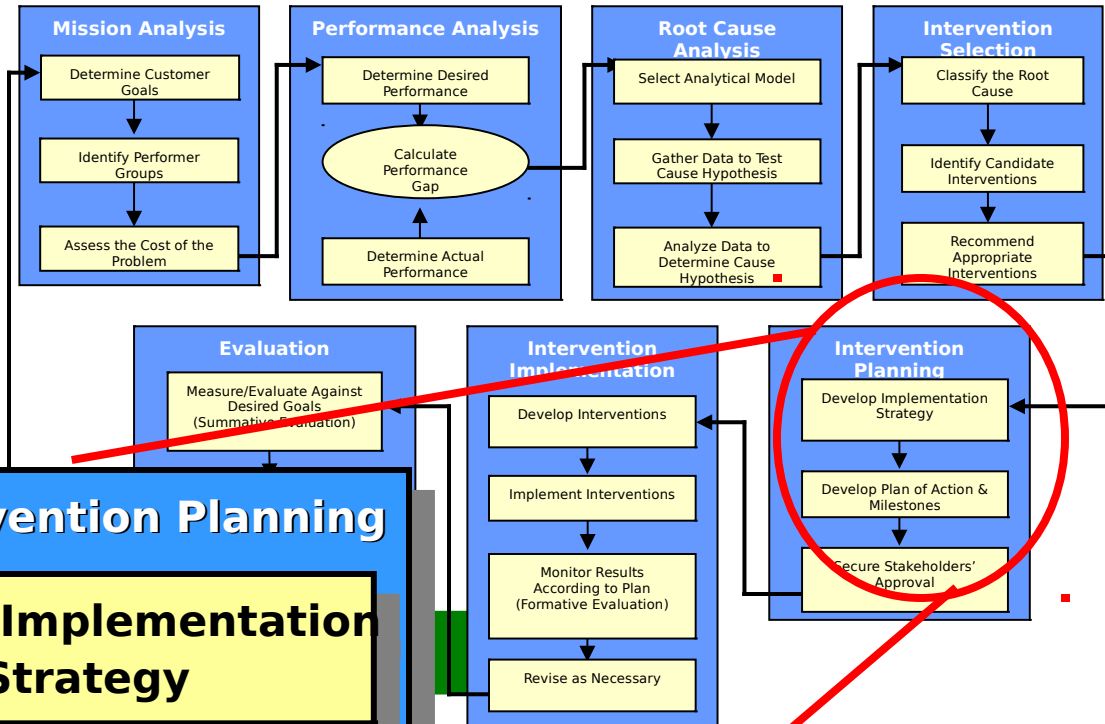
Program Area -Science of Learning

- Improvement Opportunities
 - Determine Factors Which Make Product Definition Difficult
 - SL is not well-understood throughout the Navy
 - Understanding will grow with success
- Risk: Low
 - Define Risks of Inaccurate Product Definition
 - SL has very high visibility given RITBOA. This established a mandate to move forward with implementation.



SL Input

Requests are generated through a HPI analysis when a training solution is recommended and further assistance is needed to apply the Science of Learning.



Inquiry Stage

Analysis Stage

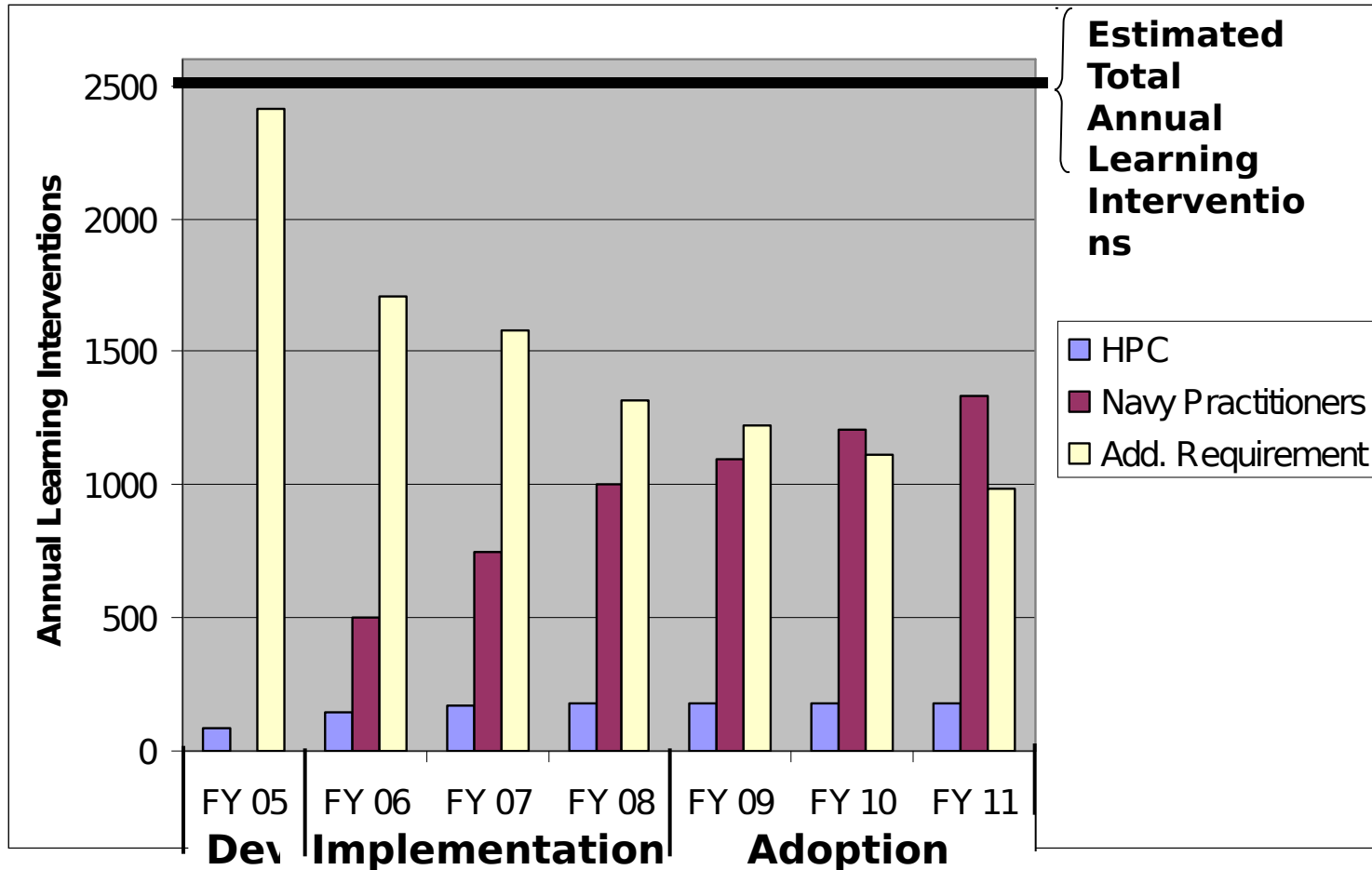
Findings Stage

Develop Implementation Strategy

Develop Plan of Actions & Milestones

Secure Stake Holder's Approval

Science of Learning (SL) Demand (FY 05 - FY 11)



**SLKR, Guidelines &
Templates**

Input Plan

Program Area -Science of Learning

- Overall Assessment
 - Requests for technical support are growing
 - N3 detachments appear to be identifying SL reachback requests at 3-5 times N75's ability to accommodate.
 - Identify Projected Workload



Science of Learning (SL)

Projected HPC Capacity

Customer	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11
NETC	13	26						
Fleet	1	1						
Acquisition		1						
Projected		57	147	168	180	180	180	180
Total	14	85	147	168	180	180	180	180

- FY04 SL Projects
- FY05 SL Projects



Input Plan

Program Area -Science of Learning

- Improvement Opportunities
 - Ability to predict input will grow with experience.
 - OPNAV Instruction will mandate use of HPI/SL
- Risk: Medium
 - Demand is not well-defined due to newness of initiative



FY04 SL Projects (Tech Support)

Customer	Inquiry	Analysis	Findings & Recommendations	Completed	Total
NETC			2		2
NPDC		3	1	4	8
NSTC					0
CNATRA				3	3
FLEET					0
CNAF					0
CNSF					0
NETWARCOM				1	1
Grand Total	0	3	3	8	14



FY05 SL Projects (Tech Support)

Customer	Inquiry	Analysis	Findings & Recommendations	Completed	Total
NETC					
NPDC	10	6	2	1	19
NSTC	6				6
CNATRA	1				1
FLEET					
CNAF					
CNSF	1				1
NETWARCOM					
Acquisition	1				1
Projected*	57				57
Grand Total	76	6	2	1	85

*** Projected projects parked in Inquiry**



Produce Required Output: Science of Learning

- Production Ramp-up
 - FY 05: Not at full strength; Tools, processes, metrics & incentives being developed.
 - FY 06: At full strength. Tools, processes, metrics & incentives in place; Testing & refinement. Practitioners apply SL.
 - FY 07- FY 11: SL becomes institutionalized.
- Productivity Enhancements and Process Efficiencies
 - SLKR
 - Templates
 - Guidelines
 - Metrics
 - Incentives



Measuring Output Quality

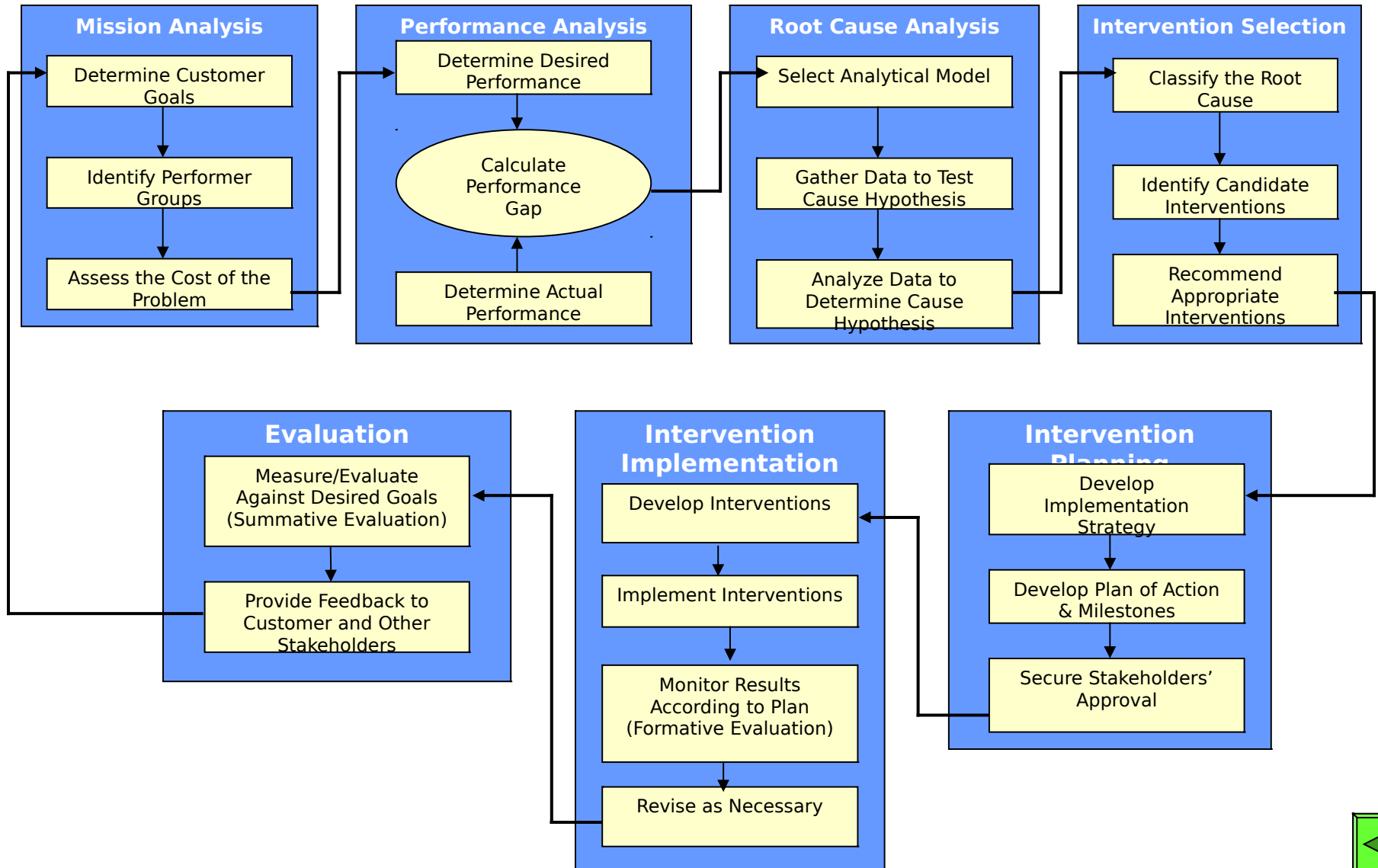
Program Area -SL Projects

- Overall Assessment
 - Discuss How Product Quality Determined
 - % of Navy-wide training solutions to which SL is applied
 - 10% reduction in training costs with initial application of SL
 - 10% increase in improved workplace performance as a result of SL application
 - Evaluate Effectiveness of Methodology
 - Surveys, observations, and studies will validate quality
- Improvement Opportunities
 - Factors Making Product Quality Measurement Difficult
 - True impact of interventions must be monitored for several years
 - Baseline performance measures often do not exist
- Risk: Low
 - Define Risks of Not Effectively Measuring Product Quality
 - Measuring quality of product is critical for validating and improving SL process



Back Up Slides

Program Area -Science of Learning



JTAs

- **A detailed representation of a job or position comprising specific duties, functions, behaviors, and competencies.**
- **ROI equates into future savings**



JTAs

Analysis Results

- **Validate Mission Requirement**
- **Define End Products**
- **Demand Basis for Input Plan**
- **Develop Production Capability**
- **Measure Output Quality**



Validate Mission Requirement Program Area - JTAs

***Requirements Should be Prioritized and Based On
Valid Fleet and Navy Needs...***

Requirements Driven by:

- Sea Warrior Tasking
 - To create a more efficient and responsive system for delivering trained individuals to Fleet
- ILE Support
- Goals to consolidate ratings
- 5VM



Define End Products

Program Area - JTAs

- End Products Are Defined through:
 - Sea Warrior Program
 - ILE Program Requirements
 - Navy Job Task Analysis SOP (HPC 2004)
 - Learning Center Tasking
- Stakeholders include:
 - CNP, NAVMAC, NPDC , Learning Centers, SYSCOMs, HPC
- Evaluate Effectiveness of Methodology
 - Technical Process of how to conduct JTA is defined
 - HPC ensures standardization of process

Define End Products

Program Area - JTAs

- Extent to Which End Products Meet Requirements
 - JTA's meet initial data requirements for 5VM, ILE
- Improvement Opportunities
 - Factors Which Make Product Definition Difficult
 - Need to harvest the JTA data through analysis
 - Eliminate redundancies
 - Achieve ROI (for example, reduce attrition through better recruit screening using JTA data)
- Risk: Medium
 - Define Risks of Inaccurate Product Definition
 - JTA's will be reviewed this year for enterprise consistency
 - Accuracy & consistency are essential for valid analysis



Input Plan

Program Area - JTAs

- Overall Assessment
 - Initial input plan (production of JTA's) driven by Sea Warrior schedule
 - Analysis phase is driven by:
 - NPDC (need to examine enterprise-wide issues)
 - Learning Center (need to examine within community)
 - Navy-wide need to connect performance from the job level to process & organization levels
 - Transition from JTA production to SL & HPI
 - Identify Projected Workload
- Improvement Opportunities
 - Factors Making Input Projection Difficult
 - Difficult to forecast analytical requirements until initial assessments are completed
 - Standardized approaches are being developed

Input Plan

Program Area - JTAs

Risk: Low

- Define Risks of Inaccurate Input Projections
 - Workload will be adjusted during execution according to priorities
 - Risk exists in terms of demand for analysis exceeding capacity
- Factors Driving Risk
 - Typically, time is critical factor.
 - Resources being re-directed for analytical support at N7.



JTAs Projected Workload

	FY 04	FY 05	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11
Enlisted	36	87	87	83	80	75	72	72
Officer	0	10	10	10	10	10	10	10
Civilian	0	10	11	21	21	21	21	21
Total	36	107	108	114	111	106	103	103

JTA
Analysis

- **FY04 JTA Projects**
- **FY05 JTA Projects**



FY04 JTA Projects

	J T A
Enlisted	36
Officer	0
Total	36



FY05 JTA Projects

	JTA	Analysis	Total
Enlisted	0	87	87
Officer	10	0	10
Civilian	10	0	10
Total	20	87	107



Produce Required Output

Program Area - JTAs

- Overall Assessment
 - Production capability exists.
 - HPC teamed with Learning Centers to support JTA's
 - HPC role will shift to analysis.
- Improvement Opportunities
 - Approach has been to test and evaluate methodology; modify as needed to achieve outcomes.
- Risk: Low



Measuring Output Quality

Program Area - JTAs

- Overall Assessment
 - Discuss How Product Quality Determined
 - JTA Quality determined through:
 - Statistical analysis (adequate sample size)
 - Consistency (comparison of similar skill objects across ratings)
 - Analysis Quality determined through achievement of results
 - Effectiveness of Methodology
 - Statistical analysis is proven methodology used by industry
 - HPI analysis is proven method (results = litmus test)
- Risk: Low
 - Define Risks of Not Effectively Measuring Product Quality
 - Invalid results = need to re-validate JTA which leads to additional workload
 - Risk decreased by standardized methodology and evaluation of results



FY05 JTA Projects

	Level I	Analysis	Total
Enlisted	0	87	87
Officer	10	0	10
Total	10	87	97



Acquisition (ACQ)

- **Inject the human performance process into all new acquisitions in order to:**
 - **Develop & incorporate SL in Navy System Training Plans**
 - **Recognize potential limitations and barriers that will impact Fleet performance early in the acquisition process**
 - **Address human performance in Developmental & Operational Testing**



Acquisition Support Analysis Results

- **Validate Mission Requirement**
- **Define End Products**
- **Demand Basis for Input Plan**
- **Develop Production Capability**
- **Measure Output Quality**



Validate Mission Requirement

Program Area - Acquisition Support

Requirements Should be Prioritized and Based On Valid Fleet and Navy Needs...

- Requirements driven by Fleet needs for new or enhanced systems
- Requirements also driven by Navy needs to improve efficiency
 - Reduce lifecycle costs
 - Reduce total ownership costs
 - Deliver capability faster



Define End Products

Program Area - Acquisition Support

- Overall Assessment
 - Discuss How End Products Are Defined
 - **Current efforts focused on understanding how to measure and evaluate the HSI process (lack of process, metrics, etc)**
 - **Evaluate effectiveness of methodology**
 - **Inability to measure Total Ownership Cost / Life Cycle Cost**
 - Determine Extent to Which End Products Meet Fleet / Other Requirements
 - **Acquisition products initially driven by Fleet needs**
 - **Improvements in acquisition process manifested as HPI outcomes**
- Improvement Opportunities
 - Determine Factors Which Make Product Definition Difficult
 - **Differentiating between HPI and Human Systems Integration**
 - **Lack of HP Technologists in Acquisition Detachments**
 - **Establishment of HSI/HPI Lab network**



Input Plan

Program Area - Acquisition Support

- Overall Assessment
 - Discuss Methodology and Identify Stakeholders Used to Project Inputs
 - Inputs driven by requests from Program Managers (customers) and acquisition issues identified by Fleet for fielded systems
 - Evaluate Effectiveness of Methodology
 - Need to move toward workload drivers (system complexity, number of platforms, dollar thresholds)
 - Objective criteria needs to be established as metric for workload (goals for reducing life cycle costs and total ownership costs; system performance metrics)
 - Identify Projected Workload
- Improvement Opportunities
 - Factors Making Input Projection Difficult
 - Goals and metrics not well-defined
 - Identify Potential Improvements
 - Establish goals and metrics
 - Delineate outputs for HSI

Input Plan

Program Area - Acquisition Support

- Risk
 - Define Risks of Inaccurate Input Projections
 - Inability to meet demand; will lead to re-prioritization of workload
 - Lack of focus on HPI and SL initiatives...becomes pair of helping hands vs. HPSM
 - Characterize Risk As Low, Medium or High
 - Risk mitigated by:
 - Staffing and establishment of customer relationship
 - Demonstrated HPI and SL value
 - Delineation of different contributions and roles for HPI and HSI



Produce Required Output

Program Area - Acquisition Support

- Overall Assessment
 - **Determine Capability to Produce Product**
 - Staffing plan being executed to establish detachments at SYSCOMs and OPTEVFOR
 - NAVAIR is currently staffed
 - Need to validate staffing vs. requirement and desired output
 - **Define Methodology**
 - HPI and SL
 - **Discuss Process Used to Prioritize Requirements**
 - Requirements driven by customer requests
 - Workload balanced according to available resources and priority
 - Improvement Opportunities
 - **Factors Making Production Difficult**
 - Staffing...will be addressed in FY 05
 - Customer development
 - **Identify Productivity Enhancements and Process Efficiencies**
 - Delineation of responsibilities

Produce Required Output

Program Area - Acquisition Support

- Risk: Medium
 - Define Risks of Insufficient Capability or Capacity
 - Adoption of HPI will occur as staffing and customer development matures

Produce Required Output

Acquisition Support: HP Projects

- **Capability to Produce Product**

Production capability is a function of:

- # and type of customer requests (driven by clearly defined outcomes)
- # of trained HPT's
- Productivity level of HPT's (# projects an analyst can complete)
- Customer commitment
- Customer ability to implement interventions



Measuring Output Quality

Program Area - Acquisition Projects

- Overall Assessment
 - Discuss How Product Quality Determined
 - Achievement of Results (End Product)
 - OPTEVFOR will play a major role in evaluating product quality
 - Evaluate Effectiveness of Methodology
 - Dependent on customer implementation
- Improvement Opportunities
 - Factors Making Product Quality Measurement Difficult
 - Baseline performance measures often do not exist
- Risk: Low
 - Define Risks of Not Effectively Measuring Product Quality
 - Must ensure that metrics and supporting data collection are adopted by customer



Acquisition Support Projected Workload

Det	FY 04	FY 05	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11
Projects*	6	45	45	45	45	45	45	45
NTSP Reviews	46	46	46	46	46	46	46	46

* Number of projects based upon number of ACAT I Systems.

- **FY04 Acquisition Support Projects**
- **FY05 Acquisition Support Projects**



FY04 Acquisition Projects

Det.	Projects	NTSP Reviews	Total
NAVAIR	6		6
Various		46	46



FY05 Acquisition Projects

Det.	Projects*	NTSP Reviews	Total
Various	45	46	91

* Number of projects based upon number of ACAT I Systems.



FY05 Acquisition Projects

Customer	Fact Finding	Analysis	Implementation	Evaluation	Completed	Total	ROI
NETC							
NPDC		2				2	
NSTC						0	
CNATRA						0	
FLEET							
CNAF						0	
CNSF						0	
Grand Total	0	2	0	0	0	2	

